the energy applied thereto and is at the same time protected against the tapping of the signal processing steps to be executed therein. --

IN THE DRAWING

As required by the Examiner, Applicants submit herewith proposed changes to the Drawing. The changes are in the form of a red ink sketch. Upon approval by the Examiner and upon issuance of a Notice of Allowance, Applicants will make these changes formal.

REMARKS

Claims 1–4 stand rejected under 35 U.S.C. 102(b) as being anticipated by Asami et al., U.S. Patent No. 6,036,100, (hereinafter "Asami"). Claims 1-4 are in the application. Applicants respectfully submit that the pending claims, as amended, are patentable for at least the following reasons.

Applicants note the Examiner guidelines for section headings, but have refrained from amending the specification. Applicants respectfully submit that section headings are only suggested by the MPEP and not required, thus, have not been added.

Claim 1 is directed to a data carrier, notably a chip card which includes a data processing unit and at least one contactless interface via which the data processing unit can be coupled to a read/write apparatus in order to exchange data signals and to take up electrical energy for operation of the data processing

unit, the data processing unit being constructed at least mainly of at least substantially asynchronously operating logic components (asynchronous logic).

Asami, as read by the applicants, relates to a noncontact IC which transmits and receives data to and from a host computer using RF signals has a buffer for storing received data temporarily and a control circuit for controlling operation of the buffer main memory thereof, wherein the control circuit starts processing data stored in the buffer only when no further data is input after a predetermined data receiving time period has elapsed from the latest data input to the buffer.

Asami fails to teach, show or disclose a read/write apparatus in order to exchange data signals and to take up electrical energy for operation of the data processing unit, the data processing unit being constructed at least mainly of at least substantially asynchronously operating logic components (asynchronous logic), as specifically recited in independent claim 1.

The Office Action states that the above features, as recited in amended independent claim 1, are shown in Asami by components 4, 5 and 6. As further described below, Applicants respectfully disagree. Moreover, the MPEP section 2131 provides that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. The identical invention must be shown in as complete detail as contained in the claim.

The structure recited in independent claim 1 provides significant advantages in data carrier systems, such as chip card systems. In the data

carrier according to the invention, the data processing unit is constructed in such a manner that at least the majority of the logic components therein, if not all components, are arranged as asynchronously operating logic components. They are distinct from synchronously operating logic components in that they are no longer controlled by a preferably centrally generated clock signal. The co-operation of asynchronously operating logic components takes place by the propagation of a message from a first logic component as a request signal to the next logic component in the series of operating steps to be performed for the data signals. A predetermined time frame, like in the case of a predetermined clock signal, no longer occurs; the period of time required for the relevant processing of data signal results exclusively from the combination of the processing times in the individual logic components to be successively traversed.

Components 4, 5 and 6 of Asami are a modulation circuit, a demodulation circuit and a UART, respectively. Applicants can find nothing in Asami to indicate that these components should be asynchronously operating logic components. Further, as shown in FIG. 2, and described in col. 4, line 61 through col. 5, line 16, a data receive enable signal is used to enable data receiving for a particular period (the data receiving period). Components 4, 5 and 6 and the data receive enable signal to enable data receiving for a particular period does not show or imply a read/write apparatus in order to exchange data signals and to take up electrical energy for operation of the data processing unit, the data processing unit being constructed at least mainly of at least substantially

asynchronously operating logic components (asynchronous logic), as recited in amended independent claim 1.

Applicant submits that the Office Action fails to make a prima facie case of anticipation because Asami does not satisfy MPEP section 2131 as anticipatory references. Withdrawal of the rejection is respectfully requested with regard to amended independent claim 1.

A review of the other art of record has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as a reference against the independent claims herein. These claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from the independent claim discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each on its own merits is respectfully requested.

The applicants submit that the claims fully satisfy the requirements of 35 U.S.C. 102. In view of the foregoing remarks, favorable reconsideration and early passage to issue of the present application are respectfully solicited.

Applicants' undersigned attorney may be reached by telephone at the number given below.

Respectfully submitted,

By _____

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CERTIFICATE OF MAILING

It is hereby certified that this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to:

COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

On April 27, 2007

By _____
Rick de Pinho, Reg. 41,703

VERSION WITH MARKING TO SHOW CHANGES MADE

Please amend the claims as follows:

1. (Amended) A data carrier, notably a chip card which includes a data processing unit and at least one contactless interface via which the data processing unit can be coupled to a read/write apparatus in order to exchange data signals and to take up electrical energy for ~~the~~ operation of the data processing unit, the data processing unit being constructed at least mainly of at least substantially asynchronously operating logic components (asynchronous logic).

2. A data carrier as claimed in Claim 1, characterized in that the contactless interface and the data processing unit are coupled to one another via an asynchronous transmission/receiving circuit which is included in the data processing unit.

3. A data carrier as claimed in Claim 1, characterized in that individual stages within at least the data processing unit operate in a time interleaved manner.

4. A data carrier as claimed in Claim 1, characterized in that the contactless interface for the electrical energy for the operation of the data processing unit has the function of an at least substantially ideal current source.